

REMARKS/ARGUMENTS

This Amendment is being filed in response to the Office Action dated July 25, 2008. Reconsideration and allowance of the application in view of the remarks to follow are respectfully requested.

Claims 1-23 are pending in the Application. Claims 22-23 are added by this amendment.

In the Office Action, claims 1-5, 10-15 and 21 are rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Publication entitled "Nonlinear Photoluminescence from Multiwalled Carbon Nanotubes; vol. 4461; pages 56-64; August 2001; to Brennan ("Brennan") in view of U.S. Patent No. 6,096,496 to Frankel ("Frankel"). Claims 6-9 are rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Brennan in view of Frankel in further view of U.S. patent No. 7,129,554 to Lieber ("Lieber"). Claims 16-17 are rejected under 35 U.S.C. §102(e) as allegedly anticipated by Brennan. Claim 18 is rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Brennan in view of U.S. Patent No. 6,649,946 to Bogner ("Bogner"). Claims 19-20 are rejected under 35 U.S.C.

§103(a) as allegedly unpatentable over Brennan in view of U.S. Patent No. 6,514,113 to Lee ("Lee").

It is respectfully submitted that claims 1-23 are allowable over Brennan alone and Brennan in view of Frankel alone and in view of any combination of Lieber, Bogner and Lee for at least the following reasons.

Brennan is directed to studies of the nonlinear behavior of multiwalled carbon nanotubes (MWNT) and particularly the nonlinear photoluminescence behavior of the MWNTs using power law dependence studies. (See, Brennan, abstract.) It is respectfully submitted that Brennan does not disclose or suggest "an optical signal processing device" nor "an optical signal processing component". While Brennan does discuss use of a reference photodiode and spectrometer (see, Brennan, page 58, section 2.3), it is merely for purposes of determining the response of the MWNTs and not for purposes of an optical signal processing device or an optical signal processing component.

Frankel shows a system (emphasis added) "that includes an electromagnetic spectral emitter that radiates a distinct electromagnetic code for each bead that uniquely identifies each bead ..." (See, Frankel, abstract.) Frankel similarly does not

disclose or suggest "an optical signal processing device" nor "an optical signal processing component".

It is respectfully submitted that the optical signal processing device of claim 1 is not anticipated or made obvious by the teachings of Brennan in view of Frankel. For example, Brennan in view of Frankel does not disclose or suggest, an optical signal processing device that amongst other patentable elements, comprises (illustrative emphasis added) "wherein the source of electromagnetic radiation, the at least one photoluminescent carbon nanotube and the detector are together configured to perform an optical signal processing operation of the optical signal processing device" as recited in claim 1. Each of Lieber, Bogner and Lee are introduced for allegedly showing elements of the dependent claims and as such, do nothing to cure the deficiencies in Brennan. Claims 2-4, 13-15 and 22 depend from claim 1 and accordingly are allowable for at least this reason as well as for the separately patentable elements contained in each of the claims. Accordingly, separate consideration and allowance of each of dependent claims 2-4, 13-15 and 22 is respectfully requested.

Further, it is respectfully submitted that the optical signal processing component of claim 5 is not anticipated or made obvious

by the teachings of Brennan in view of Frankel. For example, Brennan in view of Frankel does not disclose or suggest, an optical signal processing component that amongst other patentable elements, comprises (illustrative emphasis added) "wherein the at least one photoluminescent carbon nanotube is configured to perform an optical signal processing operation" as recited in claim 5. Claims 6-12 and 23 depend from claim 5 and accordingly are allowable for at least this reason as well as for the separately patentable elements contained in each of the claims. Accordingly, separate consideration and allowance of each of dependent claims 6-12 and 23 and 22 is respectfully requested.

It is also respectfully submitted that the optical device of claim 16 is not anticipated or made obvious by the teachings of Brennan. For example, Brennan does not disclose or suggest, an optical device that amongst other patentable elements, comprises (illustrative emphasis added) "at least one photoluminescent carbon nanotube configured to emit, in response to an input of electromagnetic radiation, light over a range that includes wavelengths from 600 to 700 nm, wherein an intensity of emitted light reaches a highest maximum at a wavelength greater than or equal to 600 nm and less than or equal to 700 nm" as recited in

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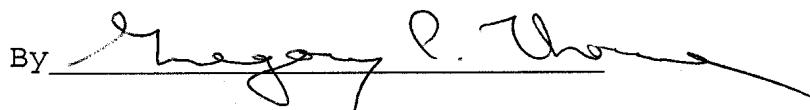
claim 16. Claims 17-21 respectively depend from claim 16 and accordingly are allowable for at least this reason as well as for the separately patentable elements contained in each of the claims. Accordingly, separate consideration and allowance of each of dependent claims 17-21 is respectfully requested.

In addition, Applicants deny any statement, position or averment of the Examiner that is not specifically addressed by the foregoing argument and response. Any rejections and/or points of argument not addressed would appear to be moot in view of the presented remarks. However, the Applicants reserve the right to submit further arguments in support of the above stated position, should that become necessary. No arguments are waived and none of the Examiner's statements are conceded.

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Applicants have made a diligent and sincere effort to place this application in condition for immediate allowance and notice to this effect is earnestly solicited.

Respectfully submitted,

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